# Center for Industrial Imaging

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**The center has developed sophisticated software to process digital images and do complex data analysis. Commercial applications include both geoscience and medical products.**

## Background

This center was established in 1995 to identify markets and commercialize technologies in proven geoscience applications and other areas, e.g. ceramics, metallurgy, and medical imaging.

## Technology Development Progress

The core technology of the Center is *Petrographic Image Analysis* (PIA), which comprises four components: image acquisition, image processing, pattern recognition/data analysis and links to physical models. Each component requires specialized hardware, software and expertise. The pattern recognition procedure within PIA has proven useful in chemical fingerprinting in a variety of geoscience/environmental applications. The center has begun to explore areas outside geoscience that have a larger economic potential, namely the medical imaging arena.

The center has been granted ownership of *Integrated Paleontological System* (IPS) Software, for further research, development and commercialization. IPS is a UNIX and PC based application for analysis and integration of geologic data in petroleum exploration and production, initially developed by the Unocal Corporation.

## Highlights and Accomplishments

*Environmental & Geoscience applications*: The center completed a demonstration project incorporating PIA into a multi-disciplinary basin study in Azerbaijan, Former Soviet Union. The project was sponsored by a consortium of petroleum companies and provided over $600,000 in matching funds. A new petroleum related PIA demonstration project in Turkmenistan, Former Soviet Union, began just prior to end of fiscal year 1996-1997.

*Medical Applications*: Two phases of a pilot study were completed to evaluate the feasibility of applying center technologies to medical imaging, specifically in the area of prostate cancer pathology. The effort is now directed towards cataloguing images, which will be used to calibrate the automated classification routines.

*Technical Alliance for Computational Stratigraphy (TACS)*: Eight major oil companies, including Unocal, Phillips, NorskHydro, British Gas, Pennzoil, Chevron, Shell & Exxon, have made a commitment to spent $185,000/year for 3 years to develop the TACS software.

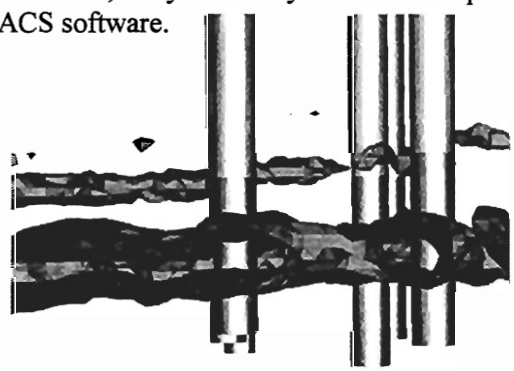

Image from isosurfacing of 3-D seismic data showing location of producing natural-gas reservoir sands, onshore Gulf Coast. Well locations are as superimposed cylinders. Image prepared as part of joint project with the Center for Scientific Computing & Imaging, U/U.

## Summary Data:

**Current**

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|---|---|
| 1996-97 Award | $100,000 |
| Matching Funds | $354,853 |
| Patents Pending | 0 |
| Patents Issued | 0 |
| License Agreements | 0 |
| Spin-off Companies | 0 |
| Companies Assisted | 27 |
| Industry Jobs | 0 |
| Center Jobs | 4 |

**Cumulative**

| | |
|---|---|
| Awards | $200,000 |
| Matching Funds | $ 760,693 |
| Patents Issued | 0 |
| License Agreements | 0 |
| Spin-off Companies | 0 |